BRUHAT BANGALORE MAHANAGARA PALIKE

ABSTRACT ESTIMATION

Package Name : Providing Gallery to Musical Fountain in JP Park in Ward No 17and Drilling of Borewells, Providing Water Supply and Construction of RO Plants in Rajarajeshwari nagara Constituency under PACKAGE-2022-23 RRN-DIV-(10).

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
1	Earth work excavation by manual means for drains,canals, waste weir draft, approach channels, key trench, foundation of Bridges and such similar works, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, excavated surface leveled and sides neatly dressed disposing off or leveling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage & other appurtenances required to complete the work. In ordinary/soft rock without blasting upto 1.5 m depth (KPWD SR 2021-22, Volume-II, Item No.1.5.1, Page No.6)	Cum	2293.87	83.21	2377.08	251.90	598785.70
2	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) (KWPD 2021-22, V-I, Item No.2.1.3, Page No.15)	Cum	263.20	16.82	280.01	6327.20	1771695.09
3	KSRB 2.8 Providing and filling in foundation with granite/trap broken metal of 100 MM and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour charges and with all lead and lift etc complete as per specification and the direction of the Engineer in charge I.No 6.4 Volume 2 SR 2021-22	Cum	167.04		167.04	2817.10	470562.75
4	Providing and laying in position Reinforced cement concrete M25 Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork to be paid separately) (KWPD 2021-22, V-I, Item No.2.4.3, Page No.17)	Cum	518.28		518.28	7136.77	3698843.60

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
5	Providing and laying in position Reinforced cement concrete M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) (KWPD 2021-22, V-I, Item No.2.5.2, Page No.17)	Cum	114.51		114.51	7855.32	899544.11
6	Providing and laying in position Reinforced cement concrete M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork to be paid separately) (KWPD 2021-22, V-I, Item No.2.5.1, Page No.17)	Cum	519.56		519.56	10354.74	5379950.13
7	Supplying, Fitting and Placing TMT Fe 500 & above Reinforcement in Foundation / Substructure / Superstructure complete as per Drawing and Technical Specifications. (KWPD 2021-22, V-III, Item No.9.3, Page No.71)	Tonne	197.34		197.34	103724.50	20468519.85
8	Earth work excavation by manual means for drains,canals, waste weir draft, approach channels, key trench, foundation of Bridges and such similar works, as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, excavated surface leveled and sides neatly dressed disposing off or leveling the excavated stuff or sorting & stacking the selected stuff for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage & other appurtenances required to complete the work. In ordinary/soft rock without blasting upto 1.5 m depth (KPWD SR 2021-22, Volume-II, Item No.1.5.1, Page No.6)	Cum	249.62		249.62	251.90	62878.02

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
9	Providing and laying in position plain cement concrete Mix 1:3:6 (M10) Using 40 mm nominal size graded crushed coarse aggregates for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) (KWPD 2021-22, V-I, Item No.2.1.3, Page No.15)	Cum	50.45		50.45	6327.20	319204.08
10	Providing and laying in position Reinforced cement concrete M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical	Cum	39.37		39.37	7120.91	280321.55
11	Providing and laying in position Reinforced cement concrete M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork	Cum	9.72		9.72	7855.32	76353.71
12	Providing and laying in position Reinforced cement concrete M25 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork	Cum	43.25		43.25	8569.44	370585.43
13	Supplying, Fitting and Placing TMT Fe 500 & above Reinforcement in Foundation / Substructure / Superstructure complete as per Drawing and Technical Specifications. (KWPD 2021-22, V-III, Item No.9.3, Page No.71)	Cum	11.54		11.54	103724.50	1197123.35
14	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand) (KWPD 2021-22, V-II, Item No.5.4, Page No.9)	Cum	93.62		93.62	5964.20	558356.48

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
15	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x200x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications. (KWPD 2021-22, V-II, Item No.6.32, Page No.17)	Sqm	578.25		578.25	1322.20	764562.15
16	Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonary including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge. (KWPD 2021-22, V-II, Item No.8.3.1, Page No.41)	Sqm	1424.43		1424.43	337.70	481030.01
17	Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.. (KWPD 2021-22, V-II, Item No.8.1.1, Page No.41)	Sqm	114.84		114.84	239.80	27538.63
18	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m^2 over and including priming coat of exterior primer applied @ 2.20 kg/10 m^2) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge. (KWPD 2021-22, V-II, Item No.8.30, Page No.46)	Sqm	1539.27		1539.27	149.60	230274.79
19	Providing and laying water proofing treatment to the Roof with PU based single component elastomeric pure polyurethane based coating on New terrace/Chajjas/Sunken portion of WC:Bathroom, cold applied PU waterproofing membrane that is highly elastic with elongation greater than 400% and tensile strength greater than 2MPa as per ASTM D412. The waterproofing membrane to be applied in 2coats @ 1.6kg per m2 to achieve final DFT (dry film thickness) of 1mm including prime coat of epoxy primer @150 g per m2 and protection with 120gsm Geo-textile over the waterproofing membrane. The finished cost to include surface preparation, making coving at Junction, Bore Packing, treatment of construction joints completely as per specification & with a 10 years	Sqm	128.34		128.34	819.50	105174.63
20	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including grouting the joints with white cement and matching pigments etc., Complete. Size of Tile 500x500 mm (KWPD 2021-22, V-II, Item No.9.12.1, Page No.60)	Sqm	384.93		384.93	1125.30	433161.73

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
21	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length andb jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-	Sqm	58.50		58.50	2761.00	161518.50
22	Supplying heavy gauge PVC conduit pipe..... dia confirming to IS 2509 with suitable size benda, junction boxes, adhesive paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall stone structure or rawl plugs in case of brick walls and cement plastering damaged portion using heavy gauge saddles at an interval of 700mm using NF screws. (ELE SR 2021-22 Page-1, Item-1.1.2)	m	450.00	150.00	600.00	80.00	48000.00
23	Supplying..... mm dia 2mm/2.5mm thick heavy gauge PVC conduit pipe with suitable size bends, metal/PVC junction boxes adhesive paste etc., and running before concreting the slab. The conduit should be tied to the reinforcement rods by using binding wires and unused ways of junction boxes and pipe ends should be covered using PVC end enclosures. run with 18SWG GI fish wire wherever necessary. (ELE SR 2021-22 Page-1, Item-1.2.2)	m	450.00	150.00	600.00	70.00	42000.00
24	Groove cutting in the wall supplying.....dia 2mm/2.5mm thick heavy gauge PVC Conduit Pipe with bends, metal junction boxes adhesive paste etc., and bracing U or J hooks and cement plastering up to the surface of the brick level and run with 18 SWG GI fish wire run through out conduit wherever necessary. (ELE SR 2021-22 Page-1, Item-1.3.2)	m	342.00	114.00	456.00	80.00	36480.00
0	Supplying and fixing sheet metal box made out of 18 SWG sheet metal with necessary holes for cable/conduit entry as required with one coat of approved make etc.(ELE SR 2021-22 Page-1, Item-1.4)	each			0.00		0.00
25	c) 135x75x65mm	each	27.00	9.00	36.00	131.00	4716.00
26	d)180x90x65mm	each	27.00	9.00	36.00	155.00	5580.00
27	e)200x90x65mm	each	27.00	9.00	36.00	169.00	6084.00
0	Supplying and fixing PVC/metal conduit accessories.(3/5) (ELE SR 2021-22 Page-1, Item-1.5)	each			0.00		0.00
0	1. Special type junction box	each			0.00		0.00
28	b)25mm junction box	each	45.00	15.00	60.00	51.00	3060.00
0	2. Deep junction box	each			0.00		0.00
29	c) 32mm deep junction box	each	45.00	15.00	60.00	69.00	4140.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
0	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting,	m			0.00		0.00
30	a)12xx''12''x3'' (330x300x76mm	m	9.00	3.00	12.00	112.00	1344.00
31	b)12''x9''x3'' (300x228x76)	m	9.00	3.00	12.00	105.00	1260.00
0	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using copper PVC insulated multi strand 2x1.5Sqmm copper wire with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet/gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. compelete for each outlet. (ELE SR 2021-22 Page-2, Item-2.1)	each			0.00		0.00
32	a) Short point up to 3Mtr from tapping point to out let via switchEach point	each	90.00	30.00	120.00	276.00	33120.00
33	b) Medium point above 3Mtr up to 6Mtr from tapping point to out let via switch (Each point)	each	90.00	30.00	120.00	386.00	46320.00
0	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using copper PVC insulated multi strand 2x1.5Sqmm copper wire without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. (ELE SR 2021-22 Page-3, Item-2.2)	each			0.00		0.00
34	a) Short point up to 3Mtr from tapping point to out let via switch box	each	90.00	30.00	120.00	251.00	30120.00
35	b) Medium point above 3Mtr up to 6Mtr from tapping point to out let via switch box	each	90.00	30.00	120.00	361.00	43320.00
0	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box. (ELE SR 2021-22 Page-5, Item-3.5.3)	each			0.00		0.00
36	I.Group-A	each			0.00		0.00
37	e) 6Moudule	each	81.00	27.00	108.00	244.00	26352.00
0	Supplying and fixing of modular switch/ Socket/stepped electronic fan regulator/dimmer/telephone socket etc on existing modular switch plate..(ELE SR 2021-22 Page-5, Item-3.6)	each			0.00		0.00
38	I.Using Group ''A'' materials	each			0.00		0.00
39	a) 6Amps one way.	each	45.00	15.00	60.00	88.00	5280.00
40	i) 32Amps DP switch	each	18.00	6.00	24.00	375.00	9000.00
41	j) 6/16Amps universal socket	each	135.00	45.00	180.00	249.00	44820.00
0	Supplying and fixing 32Amps security and energy saving DP switch with key tag suitable to operate on 230 Volts, 50Hz AC supply &completely wired on existing box. (ELE SR 6 Page-6, Item-3.7)	each			0.00		0.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
42	I.Using Group "A" materials	each	18.00	6.00	24.00	747.00	17928.00
0	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand copper wire with low conductor resistance single core in open or concealed system of wiring with specified IS-694:confirming to latest amendments. (ELE SR 2021-22 Page-3, Item-2.3)	m			0.00		0.00
43	a. 1 sqmm.	m	1350.00	450.00	1800.00	18.00	32400.00
44	b. 1.5 sqmm	m	1350.00	450.00	1800.00	26.00	46800.00
45	C.6 sqmm	m	1800.00	600.00	2400.00	87.00	208800.00
0	Supplying and fixing of PVC casing and capping on the wall or ceilng using necessary materials like bends, screws at an interval of 300mm .... Etc as required. (ELE SR 2021-22 Page-2, Item-1.8)	m			0.00		0.00
46	a) 20mm	m	180.00	60.00	240.00	27.00	6480.00
0	Supplying PVC/GI flexible conduit pipe....mm dia fixing on surface over inverted wooden plugs or phill plugs or rawl plugs and clamped using heavy gauge saddles at an interval of 300mm using NF screws and either end of the pipe terminated completely. (ELE SR 2021-22 Page-2, Item-	Nos			0.00		0.00
47	a) 20mm	Nos	135.00	45.00	180.00	25.00	4500.00
0	Extra for supplying 4mm thick white plastic plate and covering for junction boxes of size 110mm conduit using necessary machine screws. (ELE SR 2021-22 Page-6, Item-3.10.2)	Nos			0.00		0.00
48	b) 110mm	Nos	90.00	30.00	120.00	12.00	1440.00
49	Supplying a 50mm wooden plug, tapered from 50x50mm to 25x25mm and fixing by using binding wire before concreting a roof slap. (ELE SR 2021-22 Page-6, Item-3.11)	Nos	90.00	30.00	120.00	8.00	960.00
50	Supplying and fixing of slim box fitting, made out of CRCA Sheet metal body with locking type holder completely wired. Excluding Ballast & Flouresent Tube. 1 x 4' Tube light fitting. (ELE SR 2019-20 Page-41, Item-12.25.2)	each	36.00	12.00	48.00	310.00	14880.00
51	Supplying and fixing of T5 Fluorescent Tube with 14W power consumption with low 3mg Mercury content & below 40% glass content than T8 lamp & 20% less phosphor coating than T8 with initial lumen on 1350 (for 3000-6500 deg Kelvin), rated Avg life (12 Hr. Cycle) of greater than 35000 burring hours. Operating voltage range from 180V to 265V, 50Hz AC power Supply 28 watts Lamp (ELE SR 2021-22 Page-40, Item-12.18.2)	each	36.00	12.00	48.00	172.00	8256.00
52	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank. (KPWD SR 2021-22 Volume-II Item No 13.34)	Ltr	18000.00	6000.00	24000.00	8.80	211200.00

o	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
53	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 25 mm nominal dia Pipes (KPWD SR 2021-22, Volume-II, Item No.13.31.3)	mtr	162.00	54.00	216.00	347.60	75081.60
54	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall 32 mm nominal dia Pipes (KPWD SR 2021-22, Volume-II, Item No.13.31.4)	mtr	135.00	45.00	180.00	432.30	77814.00
55	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber 150 x 100 mm size P type With Non Modular common burnt clay bricks of designation 3.5 & with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight or cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design: (KPWD SR 2021-22, Volume-II, Item No.13.39)	Each	18.00	6.00	24.00	2528.90	60693.60
56	Raw water Feed pump with starter,Type-Horizontal ,Centrifugal.Make-Kirloskar/Beacon weir/Sumo/CNP(SS),Material of Construction-Cast Iron,Head-36 MWC. Motor-3.0HPthree phase.Starter-L&T Siemen make push botton type DOL Starter	Nos	18.00	6.00	24.00	24500.00	588000.00
57	Multi graded sand filter,type-verticle,Floor Mounted,Make-pentair/structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure -3.5kg/cm2, Treatment Flow Rate-6000liters/Hr,Type of valve size-Multiport,50NB,make-UKL/Initiative,Filtering Media -Gravel,Graded Sand & Pebble	Nos	18.00	6.00	24.00	33000.00	792000.00
58	Activated carbon Filter type-Verticle,Floor Mounted,Make-pentair/Structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure -3.5kg/cm2, Treatment Flow Rate-6000liters/Hr,Type of valve size-Multiport,50NB,make-UKL/Initiative,Filtering Media -Gravel, Activated Carbon & pebbles	Nos	9.00	3.00	12.00	62500.00	750000.00
59	Water Softner,type-Verticle,Floor Mounted,Make-pentair/Structural/ION EXCHANGE(INDIA) LTD/Zeolite/Aquario,min.operating Pressure 2.0kg/cm2,Max. Operating Pressure 3.5kg/cm2, Treatment Flow Rate-6000liters/Hr,Type of Resin INDION 220Na or Thermax T40	Nos	9.00	3.00	12.00	62000.00	744000.00
60	Antiscalant Dosing System,Equipment Required-Electronic Dosing Pump with Solution Tank,make-Ion Exchange (I) Ltd.,/ASIA LMI/Zeolite,Material of Construction-PP(Polypropelene),Discharge @Max Back Pressure-2.88litr/Hr @8bar,Discharge@Nominal Back Pressure=3.12Lit/Hr @ 4Bar,Chemical to be dosed-INDION Antiscalant	Nos	9.00	3.00	12.00	85000.00	1020000.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
61	Accessories for Dosing System,Solution Tank-One No,Volume-100Litres,Material of Construction-HDPE,Tank level Switch-One No.	Nos	9.00	3.00	12.00	42000.00	504000.00
62	Reverse Osmosis System,Type-Horizontal Skid,Floor Mounted,Permeate water-Minimum 2000litr/hr,Maximum Permissable TDS in feed (PPM)-2500.	Nos	9.00	3.00	12.00	89000.00	1068000.00
63	Pressure Vessel,Material of Construction-FRP,Make-Advance Composite/Code Line.	Nos	9.00	3.00	12.00	85000.00	1020000.00
64	Membrane, Type-Brackish water . Nos required-Three.Make-TORAY JAPAN /Hydranautics/Filmtec/Tricep	Nos	9.00	3.00	12.00	88000.00	1056000.00
65	High pressure pump,Type- verticle,multistage,Make-GRUNDFOS,MOTOR-7.5 HP 3Phase, Model-CRN series,Material of construction-SS316,starter-L&T/Seimens make push botton type DOL starter	Nos	9.00	3.00	12.00	55000.00	660000.00
66	Micron Filter,Type -JUMBO,Material of construction of housing-poly propelene	Nos	9.00	3.00	12.00	78000.00	936000.00
67	Instruction, Wet panel -Ms powder coated, Mounted on R.O> skid, Low pressure switch-one No,High Pressure Switch-one, Digitalconductivity Meter wiyh sensor , Indon brand-one No , ON/OFF selector Switch -one No, High pressure System Pressure Gauge - one No, Auto Flush Timer - one No, Indication Lamps -one No, product Flow Meter- one No, Reject Flow Meter-one No,Reject Re-circolation Meter-one No,Alarm-one No	Nos	9.00	3.00	12.00	86000.00	1032000.00
68	pH correction dosing System, Equipment Required-Electronic Dosing Pump with solution Tank, Make-Ion Exchange(1) Ltd.,/ASIA LMI/Zeolite,Material of construction -PP, Discharge @ max . Back Pressure-2.88 Lit/Hr@8Bar.Discharge@Nominal Back Pressure-3.12 Lit/Hr@4Bar,Frequency-100 Strokes / Min, Chemical to be dosed-PH Booster	Nos	9.00	3.00	12.00	83000.00	996000.00
69	Solution Tank with level switch, Solution Tank-one No, Volume-100 Liters. Material of construction-HDPE. Tank levelswitch-one No	Nos	9.00	3.00	12.00	15000.00	180000.00
70	Inter-connecting pipe work ,Raw water tank to feed pump suction and feed pump delivery to R.O. Inlet (up to High pressure pump in let)and RO outlet to Treated water tank-food Grade PVC pipe 40mm NB, Make-Finolex/ supreme,High pressure pump outlet to membrane inlet-ss pipe of required size, Approximate Length-35.0 Metre	Nos	9.00	3.00	12.00	78000.00	936000.00
71	Ultra violet system, Model-UVS-20,Make-Ion Exchange (I) Ltd.,/ASIA LMI/Zeolite,ALFA Flow rate-2000L/H	Nos	9.00	3.00	12.00	74500.00	894000.00
72	RO water strong tank, 2000 ltrs SS tank, to store RO water with required nozzles	Nos	9.00	3.00	12.00	80000.00	960000.00
73	Wending Machine ,Digital Swiping Card Type	Nos	9.00	3.00	12.00	35000.00	420000.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
74	Geophysical investigation at site for sinking borewells for supplying drinking water to the habitation either through the Hand Pump MWS or P.W.S.S, by vertical electrical sounding by adopting Venner or Schlumbergers's method, including reconnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a) Above 20 M and upto 30 M - 15% b)	No	9.00	3.00	12.00	5141.00	61692.00
0	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (Excluding cost of casing pipes, collars, cap etc.,	Rmt			0.00		0.00
75	0 to 50 m	Rmt	450.00	150.00	600.00	347.00	208200.00
76	50 to 100 m	Rmt	450.00	150.00	600.00	442.00	265200.00
77	100 to 150 m	Rmt	450.00	150.00	600.00	456.00	273600.00
78	150 to 200 m	Rmt	450.00	150.00	600.00	536.00	321600.00
79	200 to 250 m	Rmt	450.00	150.00	600.00	634.00	380400.00
80	250 to 300 m	Rmt	450.00	150.00	600.00	700.00	420000.00
81	300 to 350 m	Rmt	450.00	150.00	600.00	825.00	495000.00
82	350 to 400 m	Rmt	450.00	150.00	600.00	900.00	540000.00
83	400 to 420 m	Rmt	180.00	60.00	240.00	1129.00	270960.00
84	Providing and fixing 250mm dia PVC (casing pipe) (page no.XXXI, SL no.909) (KPWD SR 2016-17)	Rmt	108.00	36.00	144.00	2600.00	374400.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
85	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends.threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m.prices include Collar-Medium duty.	Rmt	450.00	150.00	600.00	1933.00	1159800.00
86	Providing and fixing MS casing collars as per IS 1239 (part-II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments	Each	75.00	25.00	100.00	150.00	15000.00
87	Providing 175mm dia Bore Cap CE (M)	No	9.00	3.00	12.00	100.00	1200.00
88	Atalanta suguna CRI KIRLOSKAR and other equipments pumps 10.00 HP/7.5 KV (20 stage)	No	9.00	3.00	12.00	49955.00	599460.00
89	Providing and fixing in trenches galvinised/mild steel tube 50mm dia nominal bore with all fittings (earth work in trenches to be measured and paid for seperately) including cost of all materials, labour charges,HOM of equipment and testing complete as per specifications. Specification No. KBS 13.2.14/13.6 (page no.92/It no.13.15)KPWD SR 2018-19.	Rmt	3150.00	1035.00	4185.00	411.28	1721206.80
90	Supplying and drawing 3 core flat PVC sheathed submersible pump cable maufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to table 3 class 5 to IS 8130-1984 and virgin grade PVC insulation and power coating extruded PVC sheathed suitable for working voltage upto 1100 volts with specified IS 694:1990 and confirming to the attwached GTP of group A 3CX4.0 sq.mm	Rmt	6210.00	2100.00	8310.00	126.70	1052877.00
91	Providing and fixing in position 50mm Nominal bore non-return valve vertical type of approved make including cost of all materials,labour and HOM of equipment with all leads complete as per specifications.(PWD SR 18-19,P-95/It no.13.62)	No	9.00	3.00	12.00	1345.14	16141.68
92	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work) :	No	9.00	3.00	12.00	597.30	7167.60
93	Spplying and fixing 50mm GI Elbow.	No	9.00	3.00	12.00	111.80	1341.60
94	Spplying and fixing 50mm GI Nipple	No	9.00	3.00	12.00	104.30	1251.60
95	Spplying and fixing 50mm GI Hose colleres	No	522.00	174.00	696.00	103.00	71688.00
96	Supplying and fixing 20" x 20" x 2.5" polished wood board made of not less than 15mm thick plank on both the sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc.,	No	9.00	3.00	12.00	302.00	3624.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
97	Supplying and fixing miniature circuit breakers on existing MCB distribution board using necessary fixing materials and 'C' type curve indicator ON/OFF energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898.(PWD Ele SR 2022-23 ,P-13/Sl no.5.17.7) 6-32 A TPN	No	9.00	3.00	12.00	1777.00	21324.00
98	Supplying of TPST with rewirable porcelain channels in SM encloser made out of 14 SWG powder coated point of approved colour 32 amps (PWD Ele SR 2022-23.P-10.It-5.5.1)	No	9.00	3.00	12.00	1944.00	23328.00
99	Supplying and fixing LED type panel board indicating lamp with required colour suitable for 220 V AC 50 HZ 12/24 V DC(PWD Ele SR 2022-23 P-14.Sl no.5.38)	No	9.00	3.00	12.00	464.00	5568.00
100	Suppling fully automatic star delta starter unit push button type with suitable wires 2 conductors and adjustable thermal timer mounted on a common base plate held in steel enclosure for use on 400/440 volts phase and wired after fixing to the existing wooden board for motor. upto 12.5HP(PWD Ele SR 2022-23,p-10,Sl no.-5.2.1)	No	9.00	3.00	12.00	6912.00	82944.00
101	Supplying and fixing single phase preventer using necessary wires over an existing panel board suitable for motar up to 20 HP capacities.(PWD Ele SR 2022-23,p-10/Sl no.5.3)	No	9.00	3.00	12.00	805.00	9660.00
102	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade multistrand copper conductor single core wire in open or concealed system of wiring as per IS 694:1990 & conforming to the attached GTP of group A. 4 sqmm (PWD Ele SR 2019-20,p-3,It-2.3.4(d)	Mtrs	180.00	60.00	240.00	59.00	14160.00
103	Supplying fixing and wiring heavy duty low voltage capacitors conforming to IS 2834 phase 400/440 volts grade, for power factor improvement of rotating machinery.(PWD Ele SR 2022-23 ,p-14/Sl no.5.37)	No	36.00	12.00	48.00	432.00	20736.00
104	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C cotouts and other equipments on the meter board using 40mm dia 2.90 thick GI pipe 2.5 mtr long buried in a pit... The pit should be filled with equal proprotion of salt and charcoal 150mm alround the pipe to complete depth. The connection from the to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia (PWD Ele SR 2019-20,p-40,Sl no.6.1)	No	9.00	3.00	12.00	2999.70	35996.40
105	Digging of trench of 0.36mtrs deepx0.5 mtrs wide refilling the trench to the required gorund level and consolidating etc., complete (PWD Ele SR 2019-20,p-41,It-6.6.2) hard soil	Mtrs	72.00	24.00	96.00	102.00	9792.00
106	Supplying laying 1.1 KV class LT UG cable having aluminium conductor PVC insulated extruded inner shethed galvanised steel strip (excep 2cx 10 sqmm wire armoured) confirming to IS-3975:1990 (No. of strip indicated in GTP) and extruded PVC outer sheathed armoured cable with specified IS-1554,part-1:1988 and confirming to the attached GTP of group A 4 core 16 sq mm PWD Ele SR 2019-20,p-40,It-6.4.4)	Mtrs	90.00	30.00	120.00	150.00	18000.00
107	Labour charge for laying 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe/ on wall / on poles as required in existing trench/duct. 6 sq mm to 16 sq mm(PWD Ele SR 2019-20,p-41,It-6.5.1)	No	225.00	75.00	300.00	11.88	3564.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
108	Supplying and fixing class-A(medium duty) GI pipe wall thickness not less then 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1KV class 40mm(PWD Ele SR 2019-20,p-41,It-6.9.1)	Rmt	18.00	6.00	24.00	335.00	8040.00
109	Supplying and fixing LT cast iron pot heads suitable for 1.1KV class UG cable filled with necessary bitumen / insulating compound complete with terminals,clamps bolts and nuts and washer etc.,complete for 16 sq mm as per specifications.(PWD Ele SR 2019-20,p-42,It-6.10.2)	No	9.00	3.00	12.00	270.00	3240.00
110	Supplying and fixing porcelain fuse channel with cut out on the existing wooden block and wiring complete 63 amps(PWD Ele SR 2019-20,p-10,It-5.7.3)	No	27.00	9.00	36.00	372.00	13392.00
111	Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 m3 in volume and stock piling at designated locations and disposal of dismantled materials and stacking serviceable and unserviceable materials separately	Cum	56.70	21.47	78.17	464.20	36284.19
112	Earth work excavation for pipeline trenches in all kinds of by mechanical means above 600 mm trench width as per drawing and technical specifications, including setting out, construction of shoring, strutting, barricading, caution lights, bracing, using sight rails & bonding rods at every 100 mm whevere necessary as directed, removal of slumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work and all other appurtenances to complete in the following strata.	Cum	158.76	57.24	216.00	376.20	81259.20
113	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete. (external work) - 50mm nominal OD pipes (KPWD SR 2018-19, P-99, It-13.87.6)	Mtr	1008.00	318.00	1326.00	772.20	1023937.20
114	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete : 25 to 40 mm nominal bore	Each	100.80	31.80	132.60	518.10	68700.06
115	Providing and fixing Chorinated Poly Venyl Chloride (CPVC) pipes conforming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes jointing of pipes and fittings with one step solvent cement, trenching, refilling & testing of joints complete. (external work). - 20mm nominal OD pipes (KPWD SR 2018-19, P-98, It-13.85.2)	Mtr	90.00	30.00	120.00	236.50	28380.00
116	Providing and fixing to wall, ceiling and floor Medium density polyethylene pipes 6.00 kgf/sq.cm working pressure 25mm outside diameter with special flange, compression type fittings, wall clips, making good the wall, ceiling and floor, including cost of all materials, labour charges, HOM of equipments and testing complete as per specifications. Specification No.KBS 13.2.15.1 / 13.9 (KPWD SR 2018-19, P-95, It-13.67)	Mtr	1125.00	375.00	1500.00	136.74	205110.00

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
117	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m , and lift upto 1.5 m. Including cost of all labour complete as per specifications	Cum	111.13	40.07	151.20	134.20	20291.04
118	Loading and unloading of stone boulder/stone aggregates/sand/kanker/ moorum. KSRRB M100-1:Placing tipper at loading point, loading with front end loader,dumping, turning for return trip, excluding time for haulage and return trip complete as per specification MORTH Chapter 1 (KPWD SR 2018-19,P-136, it.17.1)	Cum	104.33	38.64	142.97	97.96	14004.85
119	Providing and fixing Brass full way valve gate with C.I. wheel of approved quality (screwed end) 65 mm nominal bore	Each	9.00	3.00	12.00	1529.00	18348.00
120	Providing and fixing brass stop cock of approved quality :	Each	100.80	31.80	132.60	358.60	47550.36
121	Providing and laying in position plain cement concrete for levelling course for all works in foundation. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed, laid in layers not exceeding 150 mm thickness, well compacted using plate vibrators, including all lead & lifts, cost of all materials of quality, labour, Usage charges of machineries, curing, and all the other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement & formwork shall be paid separately) Mix 1:3:6 (M10) Using 20 mm nominal size graded crushed coarse aggregates	Cum	68.04	21.47	89.51	6518.60	583447.29
122	BESCOM deposit Charges and miscellaneous	No	9.00	3.00	12.00	12000.00	144000.00
123	Providing and laying in position Reinforced cement concrete M20 Using 20 mm nominal size graded crushed coarse aggregates for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necesary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical	Cum		13.12	13.12	7088.05	93009.37
124	Providing and laying in position Reinforced cement concrete M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork	Cum		3.24	3.24	7829.91	25368.91

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
125	Providing and laying in position Reinforced cement concrete M20 Design Mix Using 20 mm nominal size graded crushed coarse aggregates for all Super structures of building , Road works, Water works, Irrigation works & super structure works of bridges upto 3.50 m height. The granite/ trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers laid in layers, well compacted using needle vibrators. The cost includes all lead & lifts, cost of all materials, quality confirming to the requirements of relevant IS codes , labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications. (The cost of steel reinforcement, dowel bars & formwork	Cum		14.42	14.42	8541.72	123128.89
126	Supplying, Fitting and Placing TMT Fe 500 & above Reinforcement in Foundation / Substructure / Superstructure complete as per Drawing and Technical Specifications. (KWPD 2021-22, V-III, Item No.9.3, Page No.71)	Cum		3.85	3.85	103724.50	399041.12
127	Providing Size Stone masonry with hard stone in foundation & plinth with Cement mortar 1:6 (1 cement : 6 coarse sand) (KWPD 2021-22, V-II, Item No.5.4, Page No.9)	Cum		31.21	31.21	5964.20	186118.83
128	Providing and constructing load bearing wall with Solid Concrete blocks of size 400x200x200mm having block density more than 1800kg/m3 and minimum compressive strength of 4.00 N/mm2 conforming to IS 2185 (Part - I) - 2005 and constructed with CM 1:4 as per IS 2572:2005 including cost of all materials, labour, scaffolding and curing, usage charges of machinery etc complete as per specifications. (KWPD 2021-22, V-II, Item No.6.32, Page No.17)	Sqm		192.75	192.75	1322.20	254854.05
129	Providing 20 mm cement plaster of mix :1:4 (1 cement: 4 fine sand) to brick/stone masonary including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge. (KWPD 2021-22, V-II, Item No.8.3.1, Page No.41)	Sqm		474.81	474.81	337.70	160343.34
130	Providing 12 mm cement plaster with cement mortar 1:4 (1 cement: 4 fine sand) to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications and as per directions of Engineer-in-charge.. (KWPD 2021-22, V-II, Item No.8.1.1, Page No.41)	Sqm		38.28	38.28	239.80	9179.54
131	Finishing walls with Acrylic Smooth exterior paint of required shade :New work (Two coat applied @ 1.67 ltr/10 m^2 over and including priming coat of exterior primer applied @ 2.20 kg/10 m^2) with paint of approved quality to give an even shade, after thoroughly brooming the surface to remove all dirt, dust, mortar drops and foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour complete as per specifications and as per directions of Engineer-in-charge. (KWPD 2021-22, V-II, Item No.8.30, Page No.46)	Sqm		513.09	513.09	149.60	76758.26

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
132	Providing and laying water proofing treatment to the Roof with PU based single component elastomeric pure polyurethane based coating on New terrace/Chajjas/Sunken portion of WC:Bathroom, cold applied PU waterproofing membrane that is highly elastic with elongation greater than 400% and tensile strength greater than 2MPa as per ASTM D412. The waterproofing membrane to be applied in 2coats @ 1.6kg per m2 to achieve final DFT (dry film thickness) of 1mm including prime coat of epoxy primer @150 g per m2 and protection with 120gsm Geo-textile over the waterproofing membrane. The finished cost to include surface preparation, making coving at Junction, Bore Packing, treatment of construction joints completely as per specification & with a 10 years	Sqm		42.78	42.78	819.50	35058.21
133	Providing and laying vitrified floor tiles in different sizes (thickness to be specified by the manufacturer) with water absorption less than 0.08% and conforming to IS: 15622, of approved make, in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand), jointing with grey cement slurry @ 3.3 kg/ m2 including grouting the joints with white cement and matching pigments etc., Complete. Size of Tile 500x500 mm (KWPD 2021-22, V-II, Item No.9.12.1, Page No.60)	Sqm		128.31	128.31	1125.30	144387.24
134	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length andb jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover including cost of materials, labour, usage charges of machinery complete as per specifications and as per directions of the Engineer-in-	Sqm		19.50	19.50	2761.00	53839.50
135	Earth work in surface excavation by mechanical means for lowering & leveling the ground for all works other than foundation in all kinds of soils & upto depth not exceeding 300mm as per drawing and technical specifications, including setting out, shoring, strutting, barricading, caution lights, removal of stumps and other deleterious matter including dressing of excavated surfaces, disposing off or levelling the excavated earth or sorting & stacking the selected earth for reuse in a radius of 50 m and lift upto 1.5 m including cost of labour, tools, usage of machinery & other appurtenances required to complete the work.(Page No.8, I.No. 1.12 of Vol-1 CSR 2021-22). In all kinds of soils upto 300 mm depth	Cum		4839.58	4839.58	161.10	779656.54
136	Construction of Granular Sub-Base of required grading as per design mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401. Granular Sub-BasePlant Mix Method. Materia.Item No.4.1(V),Page No.19, Vol III SR-21-22	Cum		2903.75	2903.75	2581.70	7496608.15

Sl. No	Description	Unit	2	55	Total Quantity	Rates In Rupees	Amount Rs.
137	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver/grader in sub-base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density. Wet Mix Macadam (Plant mix method) (Page No.24, I.No. 4.27 of Vol-3 SR 2021-22).	Cum		3387.71	3387.71	2633.40	8921187.28
138	Providing and applying primer coat with SS1 grade Bitumen Emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90 kg per m2 using mechanical means. (Page No.29, I.No. 5.1 of Vol-3 SR 2021-22).Issue Rate 07/07/2022	Sqm		19358.33	19358.33	46.20	894354.62
139	Bituminous Macadam Grading - II for traffic <20 MSA Providing and laying Bituminous Macadam with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading premixed with bituminous binder VG-30 @ 3.4% by weight of mix, transported to site, laid over a previously prepared surface with mechanical paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction (Page No.31, I.No. 5.8 C of Vol-3 SR 2021-22).Issue Rate 07/07/2022	Cum		967.92	967.92	8104.80	7844767.62
140	Providing and applying tack coat with RS1 Bituminous Emulsion using emulsion pressure distributor at the rate of 0.20 kg/m2 on the prepared bituminous surface cleaned with mechanical broom(Page No.29, I.No. 5.3 of Vol-3 SR 2021-22).	Sqm		64527.75	64527.75	13.20	851766.30
141	Bituminous Concrete Grading II for traffic <20 MSA Providing and laying Bituminous Concrete with 40/60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder VG-30, @ 5.4 per cent of mix and filler, transporting the hot mix to work site, laying with mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specificationclause No. 507 complete in all respects(Page No 36, I.No.5.16 C of Vol-3 SR 2021-22).Issue Rate 07/07/2022	Sqm		2581.11	2581.11	11672.10	30126974.03

Sl. No	Description		2	55	T Qu	Rates In Rupees	Amount Rs.
142	Road Marking with Hot Applied Thermoplastic Compound with Reflectorising Glass Beads on Bituminous SurfaceProviding and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 g/m2 area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35:2015.The finished surface to be level, uniform and free from streaks and holes(Page No.57, I.No. 8.15 of Vol-3 SR 2021-22).	Sqm		2320.90	2320.90	525.80	1220329.22
						Construction Total Amount	**124569811.38**
						Add GST Charges 18%	**22422566.05**
						Add Detailed Project Report (DPR) and PMC Charges 2.0%	**3000000.00**
						Sub Total	**149992377.43**
						Miscellaneous and unforeseen charges etc.L.S	**7622.57**
						Grand Total	**150000000.00**

TECHNICAL SANCTION

Rs: 12,45,69,881/- (Rs Twelve crore forty five lakhs sixty nine thousand Eight hundred Eleven only) is accorded under the head:

By CE(R.R.N.), P.N - 22-23

Registered as CE (R.R.N) No: 65/22-23 subject to conditions contained in enclosed memo No: 65/22-23 Dt. 08/07/2022

TA, CE (R.R.N.)

ನಂ.: 37/22-23 ದಿನಾಂಕ: 20/09/2022

ರೂ. 15000000/-

(Fifteen Lakhs only)

ಅಂದಾಜು ಪಟ್ಟಿಗೆ ಆಡಳಿತಾತ್ಮಕ ಮಂಜೂರಾತಿ ನೀಡಿದೆ.

ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ರಾಜರಾಜೇಶ್ವರಿ ನಗರ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-72

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